

APPLICATION UNDER UNITED STATES PATENT LAWS

"Methods and Systems for Providing Life Management and Enhancement Applications and Services for Telematics and Other Electronic Medium"

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This is a:

- ☐ Provisional Application
- ☐ Regular Utility Application
- ☐ Continuing Application
- ☒ Continuation in Part Application
- ☐ PCT National Application
- ☐ Reissue Application

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SPECIFICATION

**METHODS AND SYSTEMS FOR PROVIDING LIFE MANAGEMENT AND
ENHANCEMENT APPLICATIONS AND SERVICES FOR TELEMATICS AND
OTHER ELECTRONIC MEDIUM**

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FIELD OF THE INVENTION

The present invention relates to methods and systems for providing life management and enhancement applications and services to customers for telematics and other electronic medium. More particularly, the present invention is directed to a business method for providing life management and enhancement services to customers via an electronic medium such as the Internet. In addition, the present invention is directed to business-to-business, business-to-government, customer-to-government, and business-to-customer applications that provide customer-centric and “reverse retailing” services.

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BACKGROUND OF THE INVENTION

The Internet continues to grow in popularity and is becoming an integral part of every day life as more and more people and businesses use it for various reasons. For example, businesses use the Internet to promote their products and services with hopes that consumers will use and purchase them. Thus, without question, many businesses believe that presence on the Internet is an important and necessary component for staying competitive in today’s marketplace.

There are currently thousands of businesses that advertise, promote, and sell their

products/services through the Internet. These businesses generally maintain and manage their own web sites and pages to advertise and sell their products and services. In other instances, businesses can advertise at other businesses' web sites and pages via banners, links, and the like.

5 It is anticipated that in the near future, there will be billions of Internet users worldwide. Many of these users will use the Internet to shop for products and services because it saves them time and money and provides convenience by allowing them to shop at home. Internet users can compare prices, products, and services by visiting one web page to another in a matter of seconds, thus enriching their shopping experience.

10 Many users also use the Internet to obtain information about anything imaginable since information on the Internet is generally free. However, in many instances, users have to search for hours and hours for particular information because of the vast amount of information on the Internet. In general, information on the Internet is not well organized, and there exists no comprehensive system for providing an efficient manner of
15 searching for particular information. As a result, users may become easily frustrated and expend a considerable amount of time on the Internet without finding the desired information.

In today's highly competitive global marketplace, there is a great need for businesses to provide the most optimal service to their customers. In particular, Internet
20 users are constantly seeking products and services that manage and enrich their lives. Currently, there are a number of segregated businesses on the Internet that offer specialized life management and enrichment products and services. For example, there are buying services such as e-retailers www.autobytel.com (cars) and

www.barnesandnoble.com (book sales), auction and discount services such as
www.ebay.com (auctioning products) and www.priceline.com (reverse auctioning airline
tickets), personal information management services (calendar and events) such as
www.when.com and www.jump.com, search engines such as www.4anything.com, and
5 the like (all web sites above believed to be a registered trademarks). Recently, the rapid
expansion of such specialized life management and enhancement businesses on the
Internet has resulted in extreme segregation, fragmentation, and inefficiencies in the
marketplace. As a result, their customers are finding out that it is quite tedious and
cumbersome to use the Internet for various life management and enrichment services.

10 Another shortcoming associated with prior art life management and enhancement
services on the Internet is that there is no convenient and efficient means of finding such
services. Consumers may spend hours or even days searching for a particular product or
service on the Internet. The inventor of the present invention believes that no
comprehensive system exists today that allows consumers to find life management and
15 enhancement applications and services from a single web site (i.e., portal) on the Internet.

It is anticipated that in the near future many vehicles or automobiles will be
equipped with telematics systems (i.e., wireless and global positioning systems).
Currently, telematics services are provided to consumers using telematics service
providers and telematics devices. The telematics device can be a hand-held device or one
20 embedded in the vehicle or automobile.

Accordingly, there is a need for methods and systems for providing life
management and enhancement applications and services to consumers in an efficient and
timesaving manner, while at the same time providing an enjoyable online experience.

Further, there is also a need for a customer relationship management method and system allowing businesses to provide customer-centric and “reverse retailing” services to their customers via the Internet.

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SUMMARY OF THE INVENTION

In view of the above-described problems of the prior art, it is an object of the present invention to provide life management and enhancement applications and services to customers.

It is another object of the present invention to provide a business method for
10 providing life management and enhancement applications and services to customers via an electronic medium such as the Internet.

It is a further object of the present invention to provide life management and enhancement applications and services to customers through a central online location.

It is yet another object of the present invention to provide highly efficient,
15 effective, organized, and comprehensive life management and enhancement applications and services to customers using customer-centric and reverse retailing principles.

It is a further object of the present invention to provide business-to-business, business-to-government, customer-to-government, and business-to-customer life management and enhancement applications and services to customers via the Internet.

20 It is yet another object of the present invention to provide an Internet-based customer relationship management application to businesses on the Internet.

It is still another object of the present invention to provide life management and enhancement services to telematics customers.

It is another object of the present invention to provide a system and method for providing applications and services to support emergency roadside assistance.

These and other objects are achieved according to a first aspect of the present invention by providing life management and enhancement applications and services to customers from a central online location. The present invention integrates multiple online services relating to life management and enhancement into a central online location (i.e., web site or portal). The central online location is used for archival, management, and enhancement of personal data, profiles, reminders, search engines, e-retailers, and the like.

A second aspect of the present invention focuses primarily on business-to-business, business-to-government, customer-to-government, and business-to-customer applications by providing businesses, customers, and the government various business opportunities using the information stored in the central online location. Such information can be used by these e-businesses and/or traditional "brick and mortar" businesses for reverse retailing, or stated alternatively, using the information as a means for reaching out to potential customers who are seeking specific services.

BRIEF DESCRIPTION OF THE DRAWINGS

These and other objects and advantages of the present invention will become apparent and more readily appreciated from the following detailed description of the presently preferred exemplary embodiments of the invention taken in conjunction with the accompanying drawings, of which:

Fig. 1 illustrates a simplified diagram showing a customer, business entity, a life management and enhancement service web site, and a customer relationship management web site in accordance with the preferred embodiment of the present invention;

Fig. 2 illustrates a system level diagram of Fig. 1 in accordance with the preferred embodiment of the present invention;

Fig. 3 illustrates a block diagram of a web server in accordance with the preferred embodiment of the present invention;

Fig. 4 illustrates a more detailed diagram of the various applications available to customers and business entities in accordance with the preferred embodiment of the present invention;

Fig. 5 illustrates an example of the various life management and enhancement services available to customers and business entities in accordance with the preferred embodiment of the present invention; and

Fig. 6 illustrates an embodiment of the present invention for telematics services in accordance with the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention will now be described in greater detail, which will serve to further the understanding of the preferred embodiments of the present invention. As described elsewhere herein, various refinements and substitutions of the various embodiments are possible based on the principles and teachings herein.

The preferred embodiments of the present invention will now be described with

noted that multiple customers and business entities are implemented in the preferred embodiment of the present invention, but only one customer and one business entity is described herein for simplicity.

In the preferred embodiment, a customer 2 and a business entity 4 access the Internet 6 using one or many commercially available browsers such as Netscape Navigator (believed to be a Registered Trademark of Netscape Corp.) and Microsoft Internet Explorer (believed to be a Registered Trademark of Microsoft Corp.). Through the Internet 6, the customer 2 can visit the life management and enhancement service (LMES) web site 8. As described above and in greater detail hereinafter, the LMES site 8 is a well-organized comprehensive site that enables the customer 2 to obtain life management and enhancement services in an efficient and effective manner. The LMES site 8 preferably includes applications and services such as a personal data manager (PDM) 10A, life style profile (LSP) 10B, personal information manager (PIM) 10C, personal reminder manager (PRM) 10D, personal e-commerce manager (PEM) 10E, personal research manager (PRM) 10F, and remote pilot manager (RPM) 10G, which applications and services are described in greater detail later herein. It is also important to note that other applications and services than those described herein can be used in the present invention as will be apparent to those skilled in this art.

When the customer 2 registers with and visits the LMES site 8, the customer 2 can use the various applications and services from this central location without having to visit other, unlinked web sites. The LMES site 8 can be used to store personal profiles for the customer 2, which profiles can be used by e-businesses and/or “brick and mortar” businesses such as the business entity 4 to provide customer-centric and “reverse

retailing” services. For example, the business entity 4 can use the information stored in the LMES site 8 to develop a relationship with the customer 2. This is accomplished by providing a customer relationship management (CRM) web site 20 to the business entity 4. In this manner, the business entity 4 uses the CRM site 20 to access customer specific and/or aggregate information from the LMES site 8 such that this information can be used to provide customer-centric services to the customer 2. Preferably, the customer 2 has control over the type and amount of personal information that he/she desires to be available to the business entity 4. This aspect of the present invention is described in greater detail later herein. Further, both the LMES and CRM sites 8, 20 are preferably password protected giving access to customers and business entities having the appropriate passwords and usernames.

Fig. 2 illustrates a system level diagram of Fig. 1 in accordance with the preferred embodiment of the present invention. As illustrated, the customer 2 can access the LMES site 8 using various methods. Preferably, the customer 2 uses a customer device such as a cellular phone 22 (with Internet access capabilities), laptop computer 24, desktop computer 26, PDA (portable digital assistant) 28, and the like to access the Internet via a physical or wireless (e.g., Bluetooth technology) connection. The customer 2 can communicate to/from the LMES site 8 via email, real time chatting, and the like.

The customer device can be any device such as a telematics device so long as the customer 2 can view, transmit, and receive electronic data via the Internet 6.

Alternatively, although not the preferred embodiment, the customer 2 can access the LMES site 8 indirectly by using a home telephone 30, fax 31, or mail service 32 to contact LMES’s personnel 34 and/or an automated service. The LMES’s personnel 34

and/or the automated service can then access the LMES site 8 fulfilling any request from the customer 2. This may be the case when there are electrical power outages and/or server problems.

The LMES web site 8 is preferably associated with a server (web and/or email)

5 36. As known, an email server is traditionally used to manage, send, and receive an email to/from the customer 2, while a web server is used to support and manage web sites. Further connected to the server 36 is a data storage/database 38 to store and save customer specific data, profiles, events, and the like, as described in more detail below.

10 The business entity 4 can be associated with its own server 42 similar to the server 36 for managing, maintaining, etc, its own data and applications. In addition, another data storage/database 44 is connected to the server 42 for storing and saving data. Although shown externally to the servers 36, 42, the data storage/databases 38, 44 can be placed internally in the servers 36, 42.

15 Once the customer 2 is linked (hardwire or wireless) to the LMES site 8, the customer 2 can obtain life management and enhancement applications and services such as an on-board database to support emergency roadside assistance. Likewise, when the business entity 4 is linked to the LMES site 8 and/or CRM site 20, customer-centric and reverse retailing services can be provided to the customer 2. These services can be provided to the customer 2 via the telephone, mail, email, Internet, and the like.

20 Fig. 3 illustrates a block diagram of a web/email server in accordance with the preferred embodiment of the present invention. The server 36, which is used to implement the present invention, includes a processor such as CPU 302, internal memory (RAM, ROM) 304 and I/O interface 306, which are coupled to a bus 320. The bus 320

may include multiple physical buses interconnected by bridges, adapters, controllers, and the like. Further coupled to the bus 320 is a communication device 308 for transmitting and receiving data via the Internet. The communication device 308 provides the server 36 with connections to the Internet and may be any device suitable for such purpose, such as a conventional modem, ISDN adapter, xDSL modem, cable modem, wireless, etc. The server 36 may also include I/O devices such a monitor (screen) 322, input device (keyboard, pointing device, microphone) 324, and printer 326, which are also coupled to the bus 320.

In addition to the conventional components described above, a LMES (life management and enhancement service) and CRM (customer relationship management) software program 310 is included in the server 36 for running applications and managing the data storage/database 38. The software program 310 can also include searching, sorting, and organizing capabilities for the data storage/database 38. The functional components described herein are preferably implemented through the LMES and CRM software program 310 that is processed by the CPU 302. Those of ordinary skill in the art will recognize other combinations of hardware and software components are readily applicable in the present invention, and that more than one software program 310 can be used for providing the LMES and CRM applications and services.

As will be apparent to those skilled in the art, the server 36 can run any of numerous operating systems, and the software program 310 can be implemented in any of numerous appropriate computer programming languages or combinations thereof, although, preferably, it is implemented, at least in part, in a language that is suitable for database access and manipulation.

The database 38 coupled to the bus 320 preferably includes a non-volatile storage medium such as CD-ROM, DVD, magneto-optical storage, external ROM, etc. The database 38 is used to store and save information pertaining to each customer and business entity. Other components which are not illustrated herein, but which are commonly used in the server 36, may also be included herein.

Fig. 4 illustrates a more detailed diagram of the various applications available to customers and business entities in accordance with the preferred embodiment of the present invention. As described above, there are two related aspects of the present invention: (1) life management and enhancement services (LMES) web site 8; and (2) customer relationship management (CRM) web site 20. These two aspects of the present invention will now be described in greater detail.

In the first aspect of the invention, the LMES site 8 is a comprehensive life management and enhancement Internet web site or portal that allows customers to manage and control daily life activities. Customers can then enjoy all aspects of their lives more fully using the various applications and services available on the LMES site 8. First, a personal data manager (PDM) 10A on the LMES site 8 allows customers to record, retain, access, maintain, and analyze a wide variety of personal data relating to physical fitness, diet, health, family, friends, insurance policies, vehicle ownership, music, books, financial plans, etc., thereby creating an easily accessible and secure one-stop repository of personal data.

Second, a life style profile (LSP) application 10B allows the customer to develop a dynamic personal profile based upon the customer's life interests and preferences. For example, customer's profile may include the customer's favorite music, foods, books,

clothing, brand names, vacation destinations, and the like.

Third, a personal information manager (PIM) 10C allows the customer to integrate personal data and profiles from the PDM 10A and LSP 10B with a personal time management tool, respectively, to generate a personal calendar/time manager with activities and events found on the Internet through web sites such as www.moviefone.com, www.culterfinder.com, www.reel.com, www.tvdata.com, and the like. For instance, the customer can plan and schedule a particular Opera show on the calendar through the PIM 10C by integrating the LSP application 10B and the web site www.culturefinder.com.

Fourth, a personal reminder system (PRS) 10D allows the customer to receive reminders for appointments, meetings, anniversaries, birthdays, events, activities, and other important times/dates. For example, a daily list of appointments and activities can be available to the customer using the PRS 10D as it accesses the PIM 10C data. In another example, one-week advance reminders of birthdays or scheduled maintenance of a car can be automatically presented to the customer by the PRS 10D. Preferably, the PRS 10D is fully integrated with the PDM 10A, LSP 10B, and PIM 10C applications. In this manner, the customer can also receive reminders via the PIM 10C. The frequency (i.e., hourly, daily, weekly, etc.) of alerting the customer of the reminders is selected by the customer.

Fifth, a personal e-commerce manager (PEM) 10E allows the customer to plan, analyze, and manage personal e-commerce activities with full integration with other LMES applications and services. For example, the PEM 10E can be used to “pull” and receive suggested book titles set at a certain price and delivery date from an e-retailer

such as www.barnesandnoble.com. Working in conjunction with the PDM 10A, the PEM 10E can notify the customer that a preferred author's newest book will be available on a specific date, at a specific price and suggest to the customer that he/she should order the book. A link can be created to a pre-completed or completed order form for the book, and a second link or button can be used to order the book. The PEM 10E can capture and store the details of each e-commerce transaction for the customer.

The customer can fill out evaluation forms to document his/her experience or transaction for each e-business entity. These forms can then be stored in the database for analyzing and forming e-business ratings. In this manner, e-business entities can receive periodic reports of the customer's evaluations of their products and services. The PEM 10E can also be used to provide suggestions of e-commerce opportunities and merchants to customers, based on the customer's interests and preferences listed using the PDM 10A, LSP 10B, and/or PIM 10D.

Sixth, the personal research manager (PRM) 10F streamlines the cumbersome and frustrating process of Internet navigating and searching by guiding the customer to web sites that are most useful, relevant, and interesting to him/her based on personal information stored in the PDM 10A, LSP 10B, and PEM 10E databases. For example, when the customer is interested in a specific topic, the PRM 10F can suggest particular web sites with information about the specific topic, such as a news article, chat room, directory, email, message board, and the like. The PRM 10F dynamically updates and prioritizes e-communities based on the PDM 10A, LSP 10B, and PEM 10E data to ensure that the customer receives the most current, pertinent and up-to-the-minute information. Customers can also search within the database for specific information using the PRM

10F search engine.

Seventh, the remote pilot manager (RPM) 10G allows the customer to remotely access services and applications from any location in the world. For example, the customer may desire to access, via the Internet, a home appliance such as his/her refrigerator having Internet connection capabilities. As known, there are many home appliances that can store information in its database. For example, the refrigerator can have a database with information about what products are currently stored therein. The customer can remotely access the refrigerator via the Internet using the RPM 10G to obtain such information and order additional products from another web site, such as www.webvan.com (online grocery). In this manner, the customer can order the products using the RPM 10G and such products can be delivered soon after the customer arrives at his/her home.

The presently preferred embodiment of the invention is implemented with the above described seven applications and services. However, it is important to note that the present invention is applicable with any number of applications and services than those described hereinabove. It is also important to note that all such applications can work in conjunction with each other in various combinations so that applications, services, information, etc., can be shared in an efficient and effective manner.

In the second aspect of the present invention, the customer relationship management site 20 provides customer-centric and reverse retailing services. The CRM site 20 is preferably used by business entities for providing customer-centric and reverse retailing services to customers through a comprehensive management of all the steps in a customer's life. As a business-to-business application, the CRM site 20 can be used by

business entities to (1) plan and design store layouts, (2) track, supervise, and maintain store plans, (3) capture and monitor customer preference, biographic, demographic and experience information, (4) advertise, (5) generate sponsorships, (6) data mine, to name a few.

5 The CRM site 20 allows e-businesses, government, and other entities to access specific and/or aggregate customer data and information contained in the database of the LMES site 8. This information and data can be provided in a report format via the CRM site 20. After accessing the customer data and information, the CRM site 20 can then be used to analyze and generate reports (marketing, advertising, etc.). For example, a
10 marketing report can be provided to a music e-retailer, which report contains customer's demographics and purchasing data (i.e., frequency and volume) such that the report can be used to design and target advertising specifically for the customer.

 As discussed above, the CRM site 20 can be used to provide a unique and highly effective customer-centric and reverse retailing services. This business model allows
15 customers to drive the retailing process by identifying the products and services that are of interest to them and based upon these interests and past usage, offers for these products and services are "pulled" from the e-retailer. This is quite different from the existing model where retailers are aggressively "pushing" a constant stream of unsolicited and undesired products and services to customers in hopes of enticing them. The main
20 difference between the conventional model and the novel business method presented herein is that in the present model, customers are in control of what, when, and how they receive and use such information. The customers are presented with various products and services that are specifically tailored towards them (i.e., customer-centric service) rather

than the customer having to search and seek out specific products and services on their own. The customers can also receive offers at desired times/dates, thereby saving them valuable time and resource.

The CRM site 20 can also include software programs for tracking the web sites that the customer visits to provide feedback and periodic reports (e.g., daily, weekly, bi-monthly, monthly) regarding the customer's shopping and web-surfing habits. Such feedback and reports can be provided via hard copy or electronically to the customer and used in directing business activities. This software program should also include searching capabilities for databases.

The database can also be set up so that "back-end" information can be available to the business entities so that they can use this information for planning and directing their marketing of products and services. For example, assume that a particular customer generally requests vacation destinations in the West Coast of the U.S. If this information is known, then business entities can advertise and market vacation destinations on the West Coast to the customer whenever a special vacation package becomes available. Such activities are subject to customer activated filters.

Furthermore, based on the way the customers conduct their searches on the Internet, the software and database can determine what each specific customer regularly looks for in life management and enhancement products and services, so that when they become available, a notice can be sent out to the customer notifying him/her of the availability of the products and services. The notice may be sent via the Internet and can include a link to a web site having the products and services. In this manner, the customer receives valuable information with very little effort and time.

Fig. 5 illustrates an example of the various life management and enhancement services available to customers and business entities in accordance with the preferred embodiment of the present invention. In the present invention, the LMES site 8 forms alliances with other Internet content providers and directories. These content providers and directories are then integrated with the LMES site 8 applications to proactively provide the applications and services discussed above. The LMES site 8 includes an Internet portal with at least thirteen life category sites such as automotive, entertainment, health, recreation, business, family, home, travel, computer, food, pet, personal, and government. Within each of these sites, there can be hundreds and thousands of additional sub-sites that are very specialized, all of which are destination sites and serve as direct entries to the LMES site 8. The portal and each of the specific sites and sub-sites can feature their own sponsors and advertisers.

The LMES site 8 generates revenue through sponsorships, advertising, e-commerce commissions, sweepstakes hosting, and the like. The reverse retailing business model is used to deliver qualified sponsorships and advertisements to customers based upon their personal data, interests, needs, habits, and preferences. From the customers' stand point, the LMES site 8 will assist them in purchasing desirable products and services without being bombarded with unwanted advertisements and sales pitches from banners and the like. In essence, customers using the LMES site 8 determine the type and amount of exposure of particular sponsorships and advertisers.

Fig. 6 illustrates an embodiment of the present invention for telematics services in accordance with the preferred embodiment of the present invention. This embodiment can be used for emergency roadside data services and other on-board (automobile)

services (e.g., grocery services) using telematics systems. In other words, the customer can access the telematics device 60 for on-board data applications for emergency roadside data services and other on-board (automobile) services (e.g., grocery services) using the LMES server 36. The on-board data application can be implemented using a telematics
5 device embedded in the vehicle 500 or other mobile telematics device such as a cellular phone 22, PDA 28, and the laptop computer 24.

In this particular embodiment, on board data application is provided to entities that provide telematics services to customers. Such entities include automobile companies such as GM or Ford or insurance companies such as AAA. The LMES server
10 36 can be thought of as a virtual garage for centralizing data from the various telematics service providers 62a...62n. The telematics service providers 62a...62n each includes a profile and preference setting software application for dynamically delivering updates and other data to the virtual garage 36. These updates are then transmitted via an FM subcarrier network to the telematics device 60. These updates can be transmitted as batch
15 updates on an hourly, daily, weekly, or monthly basis.

Using the virtual garage 36, telematics service providers 62a...62n, or combinations thereof, the customer can retrieve various data using the telematics device 60. For example, the customer can have access to route log (road conditions, road closure, detours, weather forecasts, conditions and warnings), insurance log (on-board
20 data for insurance emergency contact and history), automobile log (on-board data for vehicle emergency contact and history), traffic log (incident reports, congestion information, average travel time, speed data), travel log (point of interest updates, lowest gas prices, parking space availability), medical log (on-board data for medical emergency

contact and history), grocery log (lowest grocery prices, discounts and specials), and the like. The virtual garage 36 and the telematics service providers 62a...62n communicate with each other via the communication channel such as the Internet 6 to exchange, retrieve, and/or transmit information.

5 During an emergency roadside situation associated with the customer's vehicle 500, the customer can access the on-board database through the virtual garage 36 as discussed above. In all likelihood, the customer will use an on-board (vehicle) embedded device or other portable mobile device (e.g., PDA, cellular telephone, laptop computer) to obtain the pertinent information and/or to access the virtual garage 36. The customer can
10 then quickly and efficiently retrieve automobile, insurance, medical, weather, traffic, emergency contact, etc. information. Grocery information such as locations of lowest prices for particular items, discounts, and the like can be retrieved from the grocery log using the telematics device 60.

 In addition, when the customer requests an emergency 911 service using the
15 telematics device 60, the customer can transmit the on-board data to a Public Service Answering Point. In this manner, the Public Service Answering Point will have the on-board data for the customer in order to provide the most optimal service.

 In the previous descriptions, numerous specific details and examples are set forth such as specific applications and services to provide a thorough understanding of the
20 present invention. However, as one having ordinary skill in the art would recognize, the present invention can be practiced without resorting to the details and examples specifically set forth.

 Although various preferred embodiments have been described in detail above,

those skilled in the art will readily appreciate that many modifications of the exemplary embodiment are possible without materially departing from the novel teachings and advantages of this invention.